

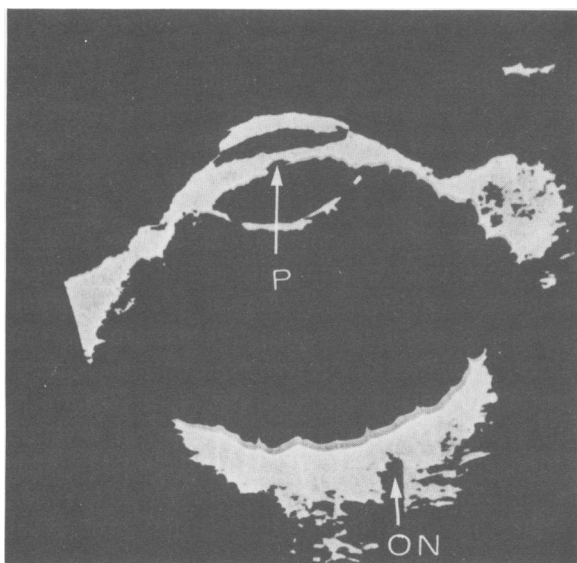
diagnosing angiomas because they can be confused with an inflammatory or serous retinal elevation. Retinoblastomas of less than 2 mm are easily missed unless they contain calcium deposits which are highly reflective to the ultrasonic vibrations.

In Coleman's opinion, ultrasound is the best "non-invasive" test for intraocular tumors available.

GEORGE L. TABOR, MD

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B-Scan of Normal Eye (15MHz). Note pupillary aperture (P), passage of the optic nerve through retrobulbar fat (ON) and normal ocular contour.

### Ultrasonography in Ophthalmology

ULTRASONOGRAPHY HAS BECOME an important diagnostic technique in ophthalmology, particularly during the past few years. The development of high resolution instruments has made it possible to examine the eye and orbit carefully with both the A-scan (time-amplitude) and the B-scan (scanned, intensity-modulated) techniques. Each of these techniques has certain advantages. Examination with the A-scan is somewhat more rapid and a careful examination of the globe can be made by using quantitation and kinetic studies. Through tissue calibration, an actual differentiation of intraocular and orbital lesions often can

be diagnosed. B-scan ultrasonography has the advantage of giving an anatomical display very similar to that of a section through the eye and orbit, and this facilitates the interpretation.

Ultrasonography provides a means for examining eyes that cannot be visualized because of corneal opacities, cataracts, hemorrhages and the like. In this way retinal detachments, tumors, hemorrhages, and foreign bodies can be diagnosed and evaluated. These techniques are particularly applicable in cases of exophthalmos, as the other forms of orbital study often do not provide adequate information for making a diagnosis.

J. WILLIAM KOHL, MD

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### Cosmetic Operations on the Eyelids

BLEPHAROPLASTY is a frequently performed operation in which excess tissue is removed from the eyelids. Removal of too little tissue can be remedied by reoperation. Removal of too much tissue can be disastrous. To help avoid overexcision, skin clamps have been designed which can be placed on the skin, removed, and reapplied until the excess is accurately determined.

A new method for marking the skin before removal also has been developed. Tissues are injected with a local anesthetic agent to which hyaluronidase has been added. After 30 minutes the skin can be pinched and the undersurfaces will seem to adhere. The "roll" of skin to be excised can be adjusted to the proper amount before any incision is made. Excision is quickly done with scissors. The use of this "pinch" technique has proven quite effective.

A new operation to provide dynamic closure of the lids affected by facial paralysis has been devised. It consists of threading a fine silicone rubber rod along the pretarsal areas of both upper and lower lids, and securing it at the canthi. The levator then can open the eye, and when the levator relaxes, a sphincter-like action closes the lids. The operation also helps to elevate the sagging lower lid and reduces the epiphora. The rod must be carefully inserted under just the right tension. There may be complications such as infection, extrusion, entropion and ectropion. However, this technique seems superior to the use of gold

weights, wire springs, and temporal muscle transplants. It is considered a distinct advance in the surgical treatment of facial paralysis.

CROWELL BEARD, MD

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### Operations on the Vitreous Body

UNTIL RECENTLY, surgical manipulation of the vitreous body has been avoided, but technical advances now have made new intraocular procedures possible. These include vitreous removal and vitreous membrane resection. Hence some patients with previously untreatable diseases causing vitreous opacification can now be helped. These conditions include longstanding vitreous hemorrhage (from diabetic retinopathy, trauma, bleeding disorders, hypertensive retinopathy and the like), ocular inflammatory diseases, and metabolic diseases such as primary amyloidosis. Removal of the opacified vitreous humor clears the pathway for light through the eye. If the retina is intact and the other ocular media are clear, visual function can be substantially improved.

Vitreous membrane resection has been helpful in some of the complicated forms of retinal detachment and in the management of some of the vitreous complications of cataract operations. The tractional phenomena, which are the most important aspects, can often be ameliorated by cutting and resecting the vitreous membranes or bands.

ALLAN E. KRIEGER, MD

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### Optic Disc Vasculitis—A Benign but Prolonged Form of Disc Edema

A MONOCULAR condition variously called retinal vasculitis, papillophlebitis and papillary vasculitis occurs in otherwise healthy young adults. Although ophthalmoscopically it is indistinguishable from papilledema or papillitis, the intracranial pressure is normal, and vision is little affected. Extensive neurosurgical investigations have always been normal.

The chief symptoms are vague, intermittent,

evanescent (minutes to hours) scotomata, often on awakening. Visual acuity is usually better than 20/30. No Marcus Gunn pupillary sign is present, and color vision is normal. Enlargement of the blind spot is the only perimetric finding. The ocular signs are confined to the posterior pole: Severe disc edema, peripapillary cotton wool spots, and dilated and tortuous veins with perivenous hemorrhages. Elevation of retinal venous pressure with normal arterial pressures (systolic and diastolic) is seen on ophthalmodynamometric examination. Delay in arterial and venous filling with leakage of dye from the disc and larger veins is noted on fluorescein angiography. Later, decompensation of the perimacular capillary bed may be seen.

Though the final visual results are almost always good, the fundus changes may take six to eighteen months to clear, leaving perivenous sheathing and dilated venules on the disc's surface as sequelae. Treatment with acetazolamide, anticoagulants, or steroids has not affected the course of this condition.

The cause is thought to be occlusion of the retinal veins, in the absence of arterial disease. This occlusion is possibly precipitated by phlebitis of the perioptic veins. The underlying cause of the vasculitis is unknown.

RICHARD L. SOGG, MD

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### Electromyography

DURING the past 20 years, there has been great interest in ocular electromyography (EMG) by various investigators including Breinin, Jampolsky, Blodi, Huber and Scott. Jampolsky recently concluded that electromyography is not useful in the management of the usual strabismus patient, although it may be helpful to an understanding of strabismus mechanisms and in cases of frank neurologic disease. Clinically useful information can be obtained in Duane's syndrome, thyroid disease, myasthenia gravis and some of the myopathic conditions. For example, in Duane's syndrome, normal medial rectus function accompanied by abnormal lateral rectus innervation is always found. Studies involving the use of an EMG needle with multiple electrodes placed at different sites along its shaft promise to yield interesting